To address increased risk of a maximum allowable operating pressure based on higher stress levels in the following areas:	Take the following additional step:
	(C) The alternative maximum allowable operating pressure was based on a design factor of 0.67 under paragraph (a) of this section and the failure pressure is less than 1.25 times the alternative maximum allowable operating pressure was based on a design factor of 0.56 under paragraph (a) of this section and the failure pressure is less than or equal to 1.4 times the alternative maximum allowable operating pressure.  (iii) If paragraph (d)(11)(iii) of this section does not require immediate repair, repair a defect within one year if any of the following apply:  (A) The defect meets the criteria for repair within one year in § 192.933(d).  (B) The alternative maximum allowable operating pressure was based on a design factor of 0.80 under paragraph (a) of this section and the failure pressure is less than 1.25 times the alternative maximum allowable operating pressure.  (C) The alternative maximum allowable operating pressure was based on a design factor of 0.67 under paragraph (a) of this section and the failure pressure is less than 1.50 times the alternative maximum allowable operating pressure.  (D) The alternative maximum allowable operating pressure was based on a design factor of 0.50 under paragraph (a) of this section and the failure pressure is less than or equal to 1.80 times the alternative maximum allowable operating pressure.  (iv) Evaluate any defect not required to be repaired under paragraph (d)(11)(ii) or (iii) of this section to determine its growth rate, set the maximum interval for repair or re-inspection, and repair or re-inspect within that interval.

- (e) Is there any change in overpressure protection associated with operating at the alternative maximum allowable operating pressure? Notwithstanding the required capacity of pressure relieving and limiting stations otherwise required by § 192.201, if an operator establishes a maximum allowable operating pressure for a pipeline segment in accordance with paragraph (a) of this section, an operator must:
- (1) Provide overpressure protection that limits mainline pressure to a maximum of 104 percent of the maximum allowable operating pressure; and
- (2) Develop and follow a procedure for establishing and maintaining accurate set points for the supervisory control and data acquisition system.

[73 FR 62177, Oct. 17, 2008, as amended by Amdt. 192–111, 74 FR 62505, Nov. 30, 2009]

#### § 192.621 Maximum allowable operating pressure: High-pressure distribution systems.

- (a) No person may operate a segment of a high pressure distribution system at a pressure that exceeds the lowest of the following pressures, as applicable:
- (1) The design pressure of the weakest element in the segment, determined in accordance with subparts C and D of this part.
- (2) 60 p.s.i. (414 kPa) gage, for a segment of a distribution system otherwise designed to operate at over 60

- p.s.i. (414 kPa) gage, unless the service lines in the segment are equipped with service regulators or other pressure limiting devices in series that meet the requirements of §192.197(c).
- (3) 25 p.s.i. (172 kPa) gage in segments of cast iron pipe in which there are unreinforced bell and spigot joints.
- (4) The pressure limits to which a joint could be subjected without the possibility of its parting.
- (5) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressures.
- (b) No person may operate a segment of pipeline to which paragraph (a)(5) of this section applies, unless overpressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with §192.195.

[35 FR 13257, Aug. 19, 1970, as amended by Amdt 192–85, 63 FR 37504, July 13, 1998]

# § 192.623 Maximum and minimum allowable operating pressure; Lowpressure distribution systems.

(a) No person may operate a low-pressure distribution system at a pressure high enough to make unsafe the operation of any connected and properly

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adjusted low-pressure gas burning equipment.

(b) No person may operate a low pressure distribution system at a pressure lower than the minimum pressure at which the safe and continuing operation of any connected and properly adjusted low-pressure gas burning equipment can be assured.

## § 192.625 Odorization of gas.

- (a) A combustible gas in a distribution line must contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit, the gas is readily detectable by a person with a normal sense of smell.
- (b) After December 31, 1976, a combustible gas in a transmission line in a Class 3 or Class 4 location must comply with the requirements of paragraph (a) of this section unless:
- (1) At least 50 percent of the length of the line downstream from that location is in a Class 1 or Class 2 location;
- (2) The line transports gas to any of the following facilities which received gas without an odorant from that line before May 5, 1975;
  - (i) An underground storage field;
  - (ii) A gas processing plant;
  - (iii) A gas dehydration plant; or
- (iv) An industrial plant using gas in a process where the presence of an odorant:
- (A) Makes the end product unfit for the purpose for which it is intended;
- (B) Reduces the activity of a catalyst; or
- (C) Reduces the percentage completion of a chemical reaction:
- (3) In the case of a lateral line which transports gas to a distribution center, at least 50 percent of the length of that line is in a Class 1 or Class 2 location; or
- (4) The combustible gas is hydrogen intended for use as a feedstock in a manufacturing process.
- (c) In the concentrations in which it is used, the odorant in combustible gases must comply with the following:
- (1) The odorant may not be deleterious to persons, materials, or pipe.
- (2) The products of combustion from the odorant may not be toxic when breathed nor may they be corrosive or harmful to those materials to which

the products of combustion will be exposed.

- (d) The odorant may not be soluble in water to an extent greater than 2.5 parts to 100 parts by weight.
- (e) Equipment for odorization must introduce the odorant without wide variations in the level of odorant.
- (f) To assure the proper concentration of odorant in accordance with this section, each operator must conduct periodic sampling of combustible gases using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable. Operators of master meter systems may comply with this requirement by—
- (1) Receiving written verification from their gas source that the gas has the proper concentration of odorant;
- (2) Conducting periodic "sniff" tests at the extremities of the system to confirm that the gas contains odorant.

# [35 FR 13257, Aug. 19, 1970]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 192.625, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

# § 192.627 Tapping pipelines under pressure.

Each tap made on a pipeline under pressure must be performed by a crew qualified to make hot taps.

#### §192.629 Purging of pipelines.

- (a) When a pipeline is being purged of air by use of gas, the gas must be released into one end of the line in a moderately rapid and continuous flow. If gas cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas must be released into the line before the gas.
- (b) When a pipeline is being purged of gas by use of air, the air must be released into one end of the line in a moderately rapid and continuous flow. If air cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas must be released into the line before the air.